TRANSMITTAL OF APPEAL BRIEF

Docket No.
3782-0126P

In re Application of: Petter ERICSON

Application No.	Filing Date	Examiner	Group Art Unit
09/812,906-Conf. #1151	March 21, 2001	R. Singh	2176

Invention: DATA FORM HAVING A POSITION-CODING PATTERN DETECTABLE BY AN OPTICAL SENSOR

TO THE COMMISSIONER OF PATENTS:

Transmitted herewith is the Appeal Brief in this application, with respect to the Notice of Appeal filed: April 10, 2007 .

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Dated: August 10, 2007

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Docket No.: 3782-0126P
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Petter ERICSON

Application No.: 09/812,906 | Confirmation No.: 1151

Filed: March 21, 2001 | Art Unit: 2176

For: DATA FORM HAVING A POSITION-CODING PATTERN DETECTABLE BY AN OPTICAL SENSOR | Examiner: R. Singh

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APPEAL BRIEF ON BEHALF OF APPELLANT: PETTER ERICSON

Commissioner for Patents
P.O. Box 1450
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August 10, 2007

Sir:

I. REAL PARTY IN INTEREST

The real party in interest for this application is the Assignee, Anoto AB, Emdalavagen 18, S-223 69 Lund, Sweden.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences pending with respect to the subject matter of the present application.

III. STATUS OF CLAIMS

Claims 1-39 are pending in this application. Claims 1, 9, 11-13, 15-16 and 22-23 are independent. No claims have been allowed.

IV. STATUS OF AMENDMENTS

No amendments have been presented after the final Official Action.

V. SUMMARY OF THE CLAIMED INVENTION

The invention of claim 1 is directed to a form, comprising a surface 101; a position-coding pattern 107 located on the surface and detectable by an optical sensor, wherein each position is encoded by directions of displacements between a plurality of marks and raster points [Specification, paragraph 0024]; a form layout on the surface indicating at least one entry field for receipt of information [Specification, Fig. 2]; and an identity pattern on the surface indicating positions on the surface that may be marked to identify the form layout [Specification, paragraph 0035].

The invention of claim 9 is directed to a method for generating a form, comprising printing on a surface a position-coding pattern detectable by an optical sensor [Specification, paragraphs 0009-0011], wherein the position coding pattern utilizes directions of displacements between a plurality of marks and raster points to code different symbol values [Specification, paragraph 0024]; printing on the surface a form layout indicating at least one entry field for receipt of information [Specification, paragraph 0027]; and printing on the surface an identity pattern indicating positions on the surface whose arrangement identifies the form layout [Specification, paragraph 0031].

The invention of claim 11 is directed to a printer [Specification, paragraph 0021] for generating a form, comprising; memory; and a processor configured to print, on a surface, a position-coding pattern detectable by an optical sensor, wherein the position coding pattern utilizes directions of displacements between a plurality of marks and raster points to code different symbol values [Specification, paragraph 0024]; print, on the surface, a form layout indicating at least one entry field for receipt of information [Specification, paragraph 0027]; and print, on the surface, an identity pattern indicating positions on the surface whose arrangement identifies the form layout [Specification, paragraph 0031].

The invention of claim 12 is directed to a computer-readable medium having stored thereon a computer-executable instructions [Specification, paragraph 0009] for performing the method of printing, on a surface, a position-coding pattern detectable by an optical sensor, wherein the position coding pattern utilizes directions of displacements between a plurality of marks and raster points to code different symbol values [Specification, paragraph 0024]; printing, on the surface, a form layout indicating at least one entry field for receipt of information [Specification, paragraph 0027]; and printing, on the surface, an identity pattern indicating positions on the surface whose arrangement identifies the form layout[Specification, paragraph 0031].

The invention of claim 13 is directed to a method for generating a form, comprising on a surface having a position-coding pattern detectable by an optical sensor, wherein the position coding pattern utilizes directions of displacements between a plurality of marks and raster points to code different symbol values [Specification, paragraph 0024], printing a form layout indicating at least one entry field for receipt of information[Specification, paragraph 0027]; and printing on the surface an identity pattern indicating positions on the surface whose arrangement

identifies the form layout [Specification, paragraph 0031].

The invention of claim 15 is directed to a computer-readable medium having stored thereon computer-executable instructions [Specification, paragraph 0009] for performing the method of printing on a surface an identity pattern indicating positions on the surface whose arrangement identifies the form layout, the surface having a position-coding pattern detectable by an optical sensor, wherein the position coding pattern utilizes directions of displacements between a plurality of marks and raster points to code different symbol values [Specification, paragraph 0024], and printing on the surface a form layout indicating at least one entry field for receipt of information [Specification, paragraph 0027].

The invention of claim 16 is directed to a method for processing a form, comprising receiving from an optical sensor position data corresponding to movement of a device containing the optical sensor over a surface having a position-coding pattern detectable by the optical sensor, wherein the position coding pattern utilizes directions of displacements between a plurality of marks and raster points to code different symbol values [Specification, paragraph 0024]; determining from the position data a form layout printed on the surface [Specification, paragraph 0032]; and determining from the position data an information entry in an entry field defined by the form layout [Specification, paragraph 0011].

The invention of claim 22 is directed to a computer-readable medium having stored thereon computer-executable instructions [Specification, paragraph 0009] for performing the method receiving from an optical sensor position data corresponding to movement of a device containing the optical sensor over a surface having a position-coding pattern detectable by the optical sensor, wherein the position coding pattern utilizes directions of displacements between a plurality of marks and raster points to code different symbol values [Specification, paragraph

0024]; determining from the position data a form layout printed on the surface [Specification, paragraph 0032]; and determining from the position data an information entry in an entry field defined by the form layout [Specification, paragraph 0011].

The invention of claim 23 is directed to a method for electronically collecting information from forms, the method comprising providing a user with a form, the form containing printed indicia on a foreground thereof [Specification, Fig. 2] prompting the user to associate written information with the printed indicia, wherein the form further includes preprinted coded information in the background thereof [Specification, Fig. 2], wherein the preprinted coding information utilizes the directions of displacements between a plurality of marks and raster points to code different symbol values [Specification, paragraph 0024]; encouraging the user to fill in portions of the form using an implement capable of marking the form, the implement being further capable of detecting the preprinted coded information over which the implement passes and generating a signal in response thereto [Specification, paragraph 0019]; and electronically receiving the signal and translating the signal into information reflecting an intention of the user [Specification, paragraph 0026].

This description of the invention has been submitted to comply with the Patent Office rules for submitting Appeal Briefs. This summary of the invention should not be considered as limiting the claimed invention.

VI. THE GROUNDS OF REJECTION

The Examiner has rejected all pending claims as follows:

1. Claims 1-39 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Flickinger et al. (USP 5,629,499) (hereinafter "*Flickinger*") in view of Sekendur (USP 5,477,012) (hereinafter "*Sekendur*").

VII. ARGUMENT

A. Claims 1-39 are patentable over *Flickinger* in view of *Sekendur*

1. Argument Summary

The reasoning provided in support of the rejection of claims 1-39 under 35 U.S.C. § 103(a) as being unpatentable over *Flickinger* in view of *Sekendur* fails to establish *prima facie* obviousness for the following reasons: (a) the rejection is deficient because the rejection attributes certain claimed features to the cited references that a detailed reading of the references reveals are not taught therein; (b) when the nature and purpose of the information inputting technique disclosed in *Flickinger* is recognized, it is evident that there is no rationale in the prior art references cited in support of the rejection or in knowledge generally available to those skilled in the art to modify *Flickinger* in a manner asserted in the rejection; and (c) by asserting that certain modifications to the information input device of *Flickinger* would have been obvious without any rationale in the applied references or elsewhere to make the asserted modifications, the rejection appears to rely on impermissible hindsight reasoning. Such deficiencies exist for each of claims 1-39.

2. The Legal Requirements of *Prima Facie* Obviousness

To establish *prima facie* obviousness, all claim limitations must be taught or suggested by the prior art and the asserted modification or combination of the prior art must be supported by some teaching, suggestion, or motivation in the applied references or in knowledge generally

available to one skilled in the art. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). The prior art must suggest the desirability of the modification in order to establish a *prima facie* case of obviousness. In re Brouwer, 77 F.3d 422, 425, 37 USPQ2d 1663, 1666 (Fed. Cir. 1995). It can also be said that the prior art must collectively suggest or point to the claimed invention to support a finding of obviousness. In re Hedges, 783 F.2d 1038, 1041, 228 USPQ 685, 687 (Fed. Cir. 1986); In re Ehrreich, 590 F.2d 902, 908-909, 200 USPQ 504, 510 (C.C.P.A. 1979).

When considering the differences between the primary reference and the claimed invention, the question for assessing obviousness is not whether the differences themselves would have been obvious, but instead whether the claimed invention as a whole would have been obvious. Stratoflex Inc. v. Aeroquip Corp., 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983).

3. The Rejection Fails to Establish *Prima Facie* Obviousness of Independent Claims 1, 9, 11-13, 15-16 and 22

A. The Cited References Fail to Teach or Suggest All of the Claim Elements

In maintaining the rejection of the claims, the Examiner asserts in the final Official Action on page 9 as follows:

> Sekendur teaches a coordinate sensor using an optical scanner reading "position-coding pattern" located on the surface and comprising a plurality of dots ("marks") in a raster point pattern. See Sekendur, figures 1-5, and col. 4, line 12 through col. 5, line 9. Further, Sekendur teaches that the location of the marks is identified by the optical sensor reading the displacement between the marks. See Sekendur, figures 1-5, and col. 4, lines 28-48.

The Examiner further asserts on page 10 of the final Official Action as follows:

> The "raster" is taught in Sekendur as the "center circle 4," which is

> consistent with the definition of a visible or virtual reference point of the displaced "marks." See, Sekendur, figure 1, and col.4, lines 30-32. The "marks" are taught in Sekendur as the "slices 7" which are oriented around the "center circle 4" and which, by their displaced position relative to the "center circle 4" indicate the location of the indicator on the page. See Sekendur, figure 1, and col. 4, lines 28-41.)

Appellant maintains that neither *Sekendur* nor *Flickinger* teach or suggest, at least, "a position coding pattern . . . wherein each position is encoded by directions of displacements between a plurality of marks and raster points," as recited in claim 1; and "a position-coding pattern . . . wherein the position coding pattern utilizes directions of displacements between a plurality of marks and raster points," as recited in claims 9, 11-13, 15-16 and 22.

As correctly noted by the Examiner, *Flickinger* fails to disclose an optically detectable position coding pattern of any kind, much less one as defined by independent claims 1, 9, 11-13, 15-16 and 22. Accordingly, the Examiner relies on the teachings of *Sekendur* to overcome the deficiencies of *Flickinger*. More specifically, the Examiner asserts that *Sekendur* discloses a position coding pattern wherein each position is encoded by directions of displacements between a plurality of marks and raster points inasmuch as *Sekendur* discloses a position coding pattern.

Although *Sekendur* discloses a position coding pattern, nowhere in *Sekendur* is there any disclosure or suggestion that positions are encoded by *directions of displacements between a plurality of marks and raster points* as claimed.

Sekendur discloses in col. 4, lines 28-41 as follows:

> One embodiment comprises a surface systematically coded with a plurality of dots 1 in FIG. 1 designating coordinates. Each dot 2 in FIG. 1 is divided into three concentric circles partitioned into quadrants 3 in FIG. 1. The center circle 4 in FIG. 1 forms a small dot, while the other circles form the inner 5 in FIG. 1 and outer 6 in FIG. 1 rings. Each quadrant of each ring represents a digit of a four digit number and is further divided into four equal slices 7 in FIG. 1. The upper right quadrant is the first digit moving clockwise. The outer ring represents the X coordinate and the inner ring represents the Y coordinate. A combination of dark and light slices in the rings of each dot indicates an X-Y coordinate FIG. 2. The use of the center dot for additional data is optional.

As shown in the above disclosure, information is encoded by combination of dark and light slices in the rings of each dot. The slices 7 of rings 5 and 6 are about the center circle 4. Each of the dots of *Sekendur* are divided in the same manner. The position is encoded based on which of the predefined slices are marked and which are unmarked. During the encoding process, *Sekendur* determines for each slice whether it should be filled in or not. *Sekendur* is not at all concerned with the **direction** of displacement of the slices. As such, the manner of encoding taught by *Sekendur* is wholly different from the claimed recitation, "wherein each position is encoded by directions of displacements between a plurality of marks and raster points."

Assuming, *arguendo*, an alternative interpretation where the black slices within each of the dots teach the "marks" as recited in the claim, Appellant respectfully submits that, again, *Sekendur* is not at all concerned with the direction of displacement of the black slices, but is merely concerned with whether the slices are filled in or not. *Sekendur* teaches that different positions are encoded by a different number of black slices. The encoding is not carried out by displacing each mark in one of a given number of displacement directions, but by deciding whether each one of a predetermined number of slices in a predetermined configuration should be a black slice or a white slice.

For the reasons set forth above, Appellant respectfully submits that *Sekendur* fails to teach or suggest "a position coding pattern . . . wherein each position is encoded by directions of displacements between a plurality of marks and raster points," as recited in claim 1; and "a position-coding pattern . . . wherein the position coding pattern utilizes directions of displacements between a plurality of marks and raster points," as recited in claims 9, 11-13, 15-16 and 22." As such, *Sekendur* fails to cure the deficiencies of the teachings of *Flickinger*.

Since *Flickinger* and *Sekendur* both fail to teach or suggest a position-coding pattern wherein each position is encoded by directions of displacements between a plurality of marks and raster points as claimed, the combination of these two references cannot possibly disclose or suggest said elements. Therefore, even if one skilled in the art were motivated to combine *Flickinger* and *Sekendur*, which Appellant does not concede, the combination would still fail to render claims 1, 9, 11-13, 15-16 and 22 unpatentable because the combination fails to disclose each and every claimed element.

It is respectfully submitted that the Examiner has failed to establish *prima facie* obviousness under 35 U.S.C. § 103(a) by failing to provide references that teach or suggest all of the elements as recited in the claims. For at least this reason, the claims are patentable over *Flickinger* in view of *Sekendur*.

B. The Examiner has Cited Non-Analogous Art in Support of the Rejections

It is well known that the examiner must determine what is "analogous prior art" for the purpose of analyzing the obviousness of the subject matter at issue. "In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). See also *In re Deminski*, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986); *In re Clay*, 966 F.2d 656, 659, 23 USPQ2d 1058, 1060-61 (Fed. Cir. 1992)

Appellant maintains that the *Flickinger* reference is non-analogous art. The system of the present application directly senses pen position obtained from a position-coding pattern located

on the surface and detectable by an optical sensor. The *Flickinger* reference does not employ such a system. The entirety of the *Flickinger* reference is directed to improvements in a position sensing system in which a stylus or pen is sensed by a sensor positioned under the paper. The stylus or pen never determines position, the position instead being determined by circuitry and sensors in the underlying substrate which senses proximity of the pen to the board. This is contemplated in several ways. One way is that the board generates an electromagnetic field and senses disturbance in the field caused by the tip of the pen. This technique is explained at column 2, beginning at line 45. A second contemplated method is where the pen has an active electromagnetic field generator, and the sensors in the board detect this electromagnetic field to determine the position of the pen. A third technique is to sense the pressure created by the pen on the board. However, each of these techniques employs sensors located under a sheet of paper.

As *Flickinger* is not be in the field of Appellant's endeavor and is not reasonably pertinent to the particular problem with which the inventor was concerned, Appellant respectfully submits that *Flickinger* is non-analogous art.

C. The Purported Combination Changes the Principle of Operation of the Primary Reference

It is well known that the if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).

The Examiner asserts in the final Official Action on page 9 as follows:

> The suggestion or motivation for making the combination is that Flickinger teaches locating a point of a user's position on a surface, such as a writing surface, and Sekendur teaches an alternate method for locating that point that is combinable and complimentary to that taught by Flickinger. Removing the coordinate location teaching of

> Flickinger would leave a system of an optical sensor working with writing on a form, and the electronics would be removed. Combining the teachings of Flickinger with that of Sekendur would result in a system of an optical sensor sensing the position of form entries by the identification of dots on a page. Both Flickinger and Sekendur teach optical identification of the form.
>
> Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the teachings of Flickinger and Sekendur to result in the inventions specified in claim 1.

As can be seen from the Examiner's statements, the Examiner seeks to replace the position sensing grid on the surface under the paper with the coordinate pen sensor and paper of *Sekendur*. To make such a modification of *Flickinger* would be to destroy or eliminate the entirety of the sensing system of *Flickinger* and replace it with the entirety of the system of *Sekendur*. Clearly, this would change the principle of operation of the *Flickinger* device. Instead of using a sensing device, positioned below a sheet of paper, that senses a pen position, the Examiner seeks to replace that system with a pen that senses its position on a paper. Since the principle of operation of the *Flickinger* device is changed, Appellant respectfully submits that the Examiner's combination of the references is insufficient to render the claims *prima facie* obvious.

As there is no rationale or motivation for making the purported modification, the Examiner has failed to establish *prima facie* obviousness. At least for this reason, the claims are patentable over the references as cited.

4. The Rejection Fails to Establish *Prima Facie* Obviousness of Independent Claim 23

A. The Cited References Fail to Teach or Suggest All of the Claim Elements

In maintaining the rejection of the claims, the Examiner asserts in the final Official Action on page 9 as follows:

> Sekendur teaches a coordinate sensor using an optical scanner reading "position-coding pattern" located on the surface and comprising a plurality of dots ("marks") in a raster point pattern. See Sekendur, figures 1-5, and col. 4, line 12 through col. 5, line 9. Further, Sekendur teaches that the location of the marks is identified by the optical sensor reading the displacement between the marks. See Sekendur, figures 1-5, and col. 4, lines 28-48.

Appellant maintains that neither *Sekendur* nor *Flickinger* teach or suggest, at least, "wherein the preprinted coding information utilizes the directions of displacements between a plurality of marks and grid points to code different symbol values," as recited in claim 23.

As correctly noted by the Examiner, *Flickinger* fails to disclose an optically detectable position coding pattern of any kind, much less one as defined by independent claim 23. Accordingly, the Examiner relies on the teachings of *Sekendur* to overcome the deficiencies of *Flickinger*. More specifically, the Examiner asserts that *Sekendur* discloses a position coding pattern wherein each position is encoded by directions of displacements between a plurality of marks and raster points inasmuch as *Sekendur* discloses a position coding pattern.

However, as noted above, nowhere in these alternative embodiments, like the first, is there any disclosure or suggestion of coding positions based on the *direction* of displacements between a plurality of marks and grid points as claimed.

Since *Flickinger* and *Sekendur* both fail to disclose or suggestion a position-coding pattern wherein each position is encoded by directions of displacements between a plurality of

marks and grid points as claimed, the combination of these two references cannot possibly disclose or suggest said elements. Therefore, even if one skilled in the art were motivated to combine *Flickinger* and *Sekendur*, which Appellant does not concede, the combination would still fail to render claim 23 unpatentable because the combination fails to disclose each and every claimed element.

It is respectfully submitted that the Examiner has failed to establish *prima facie* obviousness under 35 U.S.C. § 103(a) by failing to provide references that teach or suggest all of the elements as recited in the claims. For at least this reason, claim 23 is patentable over *Flickinger* in view of *Sekendur*.

B. The Examiner has Cited Non-Analogous Art in Support of the Rejections

As noted above, *Flickinger* is non-analogous art. As *Flickinger* is not be in the field of Appellant's endeavor and is not reasonably pertinent to the particular problem with which the inventor was concerned, Appellant respectfully submits that *Flickinger* is non-analogous art.

C. The Purported Combination Changes the Principle of Operation of the Primary Reference

As noted above, the Examiner seeks to replace the position sensing grid on the surface under the paper with the coordinate pen sensor and paper of *Sekendur*. To make such a modification of *Flickinger* would be to destroy or eliminate the entirety of the sensing system of *Flickinger* and replace it with the entirety of the system of *Sekendur*. Clearly, this would change the principle of operation of the *Flickinger* device. Instead of using a sensing device, positioned below a sheet of paper, that senses a pen position, the Examiner seeks to replace that system with a pen that senses its position on a paper. Since the principle of operation of the *Flickinger* device

is changed, Appellant respectfully submits that the Examiner's combination of the references is insufficient to render the claims *prima facie* obvious.

For at least this reason Appellant maintains claim 23 is patentable over the references as cited.

D. There is no Rationale for Making the Purported Combination

As noted above, there is no rationale for making such a modification to *Flickinger*. As there is no rationale or motivation for making the purported modification, the Examiner has failed to establish *prima facie* obviousness. At least for this reason, claim 23 is patentable over the references as cited.

5. Claims 2-8, 10, 14, 17-21 and 24-39 are patentable over *Flickinger* in view of *Sekendur*

Appellant submits that claims 2-8, 10, 14, 17-21 and 24-39 are allowable for the reasons set forth above at least based upon their dependency on their respective allowable independent claims. Appellants further submit that dependent claims 2-8, 10, 14, 17-21 and 24-39 are separately patentable and offer the following additional arguments for the invention of 2-8, 10, 14, 17-21 and 24-39.

The rejection of these claims asserts that *Flickinger* and/or *Sekendur* teach the incremental features recited therein. Appellants submit, however, that the rejection's reliance on these references as allegedly teaching these incremental features fails to make up for the deficiencies of the rejection applied to the independent claims. Thus *Flickinger*, taken alone or in combination with *Sekendur*, assuming these references are combinable, which Appellant does

not admit, fails to establish *prima facie* obviousness of dependent claims 2-8, 10, 14, 17-21 and 24-39.

VIII. CONCLUSION

For the reasons specifically set forth above, the outstanding rejections set forth in the Final Office Action should be reversed.

Respectfully submitted,

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IX. Appendix of Claims

1. (Previously Presented) A form, comprising:

a surface;

a position-coding pattern located on the surface and detectable by an optical sensor,

wherein each position is encoded by directions of displacements between a plurality of marks and raster points;

a form layout on the surface indicating at least one entry field for receipt of information; and

an identity pattern on the surface indicating positions on the surface that may be marked to identify the form layout.

2. (Original) The form of claim 1, wherein the identity pattern comprises a bar code.

3. (Original) The form of claim 1, wherein the identity pattern comprises a bar code that prevents the optical sensor from detecting the position-coding pattern on portions of the surface covered by bars of the bar code but allows the optical sensor to detect the position-coding pattern between the bars of the bar code.

4. (Original) The form of claim 1, wherein the identity pattern also indicates a scale of the form layout.

5. (Original) The form of claim 1, wherein he identity pattern comprises a box for receipt of a cross.

6. (Original) The form of claim 1, wherein the entry field comprises a shape to be marked.

7. (Original) The form of claim 1, wherein the entry field comprises a scale that can be marked at a location to indicate a numerical rating.

8. (Original) The form of claim 1, wherein the entry field comprises space for receiving handwritten information.

9. (Previously Presented) A method for generating a form, comprising:

printing on a surface a position-coding pattern detectable by an optical sensor, wherein the position coding pattern utilizes directions of displacements between a plurality of marks and raster points to code different symbol values;

printing on the surface a form layout indicating at least one entry field for receipt of information; and

printing on the surface an identity pattern indicating positions on the surface whose arrangement identifies the form layout.

10. (Original) The method of claim 9, wherein printing on the surface the form layout comprises printing the form layout at a known location relative to the position-coding pattern.

11. (Previously Presented) A printer for generating a form, comprising;

memory; and

a processor configured to

print, on a surface, a position-coding pattern detectable by an optical sensor, wherein the position coding pattern utilizes directions of displacements between a plurality of marks and raster points to code different symbol values;

print, on the surface, a form layout indicating at least one entry field for receipt of information; and

print, on the surface, an identity pattern indicating positions on the surface whose arrangement identifies the form layout.

12. (Previously Presented) A computer-readable medium having stored thereon a computer-executable instructions for performing the method of:

printing, on a surface, a position-coding pattern detectable by an optical sensor, wherein the position coding pattern utilizes directions of displacements between a plurality of marks and raster points to code different symbol values;

printing, on the surface, a form layout indicating at least one entry field for receipt of information; and

printing, on the surface, an identity pattern indicating positions on the surface whose arrangement identifies the form layout.

13. (Previously Presented) A method for generating a form, comprising:

on a surface having a position-coding pattern detectable by an optical sensor, wherein the position coding pattern utilizes directions of displacements between a plurality of marks and raster points to code different symbol values, printing a form layout indicating at least one entry field for receipt of information; and

printing on the surface an identity pattern indicating positions on the surface whose

arrangement identifies the form layout.

14. (Original) The method of claim 13, wherein printing on the surface the form layout comprises printing the form layout at a known location relative to the position-coding pattern.

15. (Previously Presented) A computer-readable medium having stored thereon computer-executable instructions for performing the method of:

printing on a surface an identity pattern indicating positions on the surface whose arrangement identifies the form layout, the surface having a position-coding pattern detectable by an optical sensor, wherein the position coding pattern utilizes directions of displacements between a plurality of marks and raster points to code different symbol values, and printing on the surface a form layout indicating at least one entry field for receipt of information.

16. (Previously Presented) A method for processing a form, comprising:

receiving from an optical sensor position data corresponding to movement of a device containing the optical sensor over a surface having a position-coding pattern detectable by the optical sensor, wherein the position coding pattern utilizes directions of displacements between a plurality of marks and raster points to code different symbol values;

determining from the position data a form layout printed on the surface; and

determining from the position data an information entry in an entry field defined by the form layout.

17. (Original) The method of claim 16, further comprising storing the information entry in a database.

18. (Original) The method of claim 16, further comprising:

translating the information entry into a non-handwritten format based on a type of information expected to be received in the entry field; and

storing the translated information entry in a database.

19. (Original) The method of claim 16, further comprising:

translating the information entry into a result of a type chosen from the group consisting of Boolean variable, whole number, real number, and text string; and

storing the result in a database.

20. (Original) The method of claim 16, wherein determining from the position data the form layout printed on the surface comprises:

determining a sub-portion of the position data located in a predetermined area of the position-coding pattern;

finding a match to the sub-portion in a plurality of known identity patterns representing possible form layouts; and

determining the form layout corresponding to the match.

21. (Original) The method of claim 16, wherein determining from the position data the information entry in the entry field defined by the form layout comprises determining a sub-portion of the position data whose location falls in an area of the position-coding pattern known to be encompassed by the entry field.

22. (Previously Presented) A computer-readable medium having stored thereon computer-executable instructions for performing the method:

receiving from an optical sensor position data corresponding to movement of a device containing the optical sensor over a surface having a position-coding pattern detectable by the optical sensor, wherein the position coding pattern utilizes directions of displacements between a plurality of marks and raster points to code different symbol values;

determining from the position data a form layout printed on the surface; and

determining from the position data an information entry in an entry field defined by the form layout.

23. (Previously Presented) A method for electronically collecting information from forms, the method comprising:

providing a user with a form, the form containing printed indicia on a foreground thereof prompting the user to associate written information with the printed indicia, wherein the form further includes preprinted coded information in the background thereof, wherein the preprinted coding information utilizes the directions of displacements between a plurality of marks and raster points to code different symbol values;

encouraging the user to fill in portions of the form using an implement capable of marking the form, the implement being further capable of detecting the preprinted coded information over which the implement passes and generating a signal in response thereto; and

electronically receiving the signal and translating the signal into information reflecting an intention of the user.

24. (Original) The method of claim 23, further including storing in a database the

information reflective of the user's intention.

25. (Original) The method of claim 23, herein the form is printed on a material chosen from the group consisting of paper stock, plastic, and laminate.

26. (Original) The method of claim 23, herein the written information is hand-written.

27. (Original) The method of claim 23, wherein the implement is in the form of a pen having an optical code reader therein.

28. (Previously Presented) The form of claim 1, wherein each mark is uniquely associated with a raster point.

29. (Previously Presented) The form of claim 1, wherein the raster points are derived from the marks.

30. (Previously Presented) The form of claim 1, wherein a single mark contributes to at least two different positions.

31. (Previously Presented) The form of claim 1, wherein the raster points are undetectable by the optical sensor.

32. (Previously Presented) The form of claim 1, wherein the plurality of marks comprises dots.

33. (Previously Presented) The method of claim 16, wherein the plurality of marks comprises dots.

34. (Previously Presented) The method of claim 23, wherein the plurality of marks comprises dots.

35. (Previously Presented) The form of claim 1 wherein the position coding pattern includes a mark present at every raster point.

36. (Previously Presented) The method of claim 9 wherein the position coding pattern includes a mark present at every raster point.

37. (Previously Presented) The method of claim 13 wherein the position coding pattern includes a mark present at every raster point.

38. (Previously Presented) The method of claim 16 wherein the position coding pattern includes a mark present at every raster point.

39. (Previously Presented) The method of claim 23 wherein the position coding pattern includes a mark present at every raster point.

X. EVIDENCE OF APPENDIX

No evidence has been submitted under 37 C.F.R. 1.130, 1.131 or 1.132. No other evidence has been entered by the Examiner and relied upon in this appeal.

XI. RELATED PROCEEDINGS APPENDIX

There are no related proceedings.